

IN THE CLAIMS

Please amend the claims as follows. This listing of claims replaces all prior versions.

1. (Currently amended) A method of identifying a human subject having an increased sensitivity to warfarin, wherein a therapeutic dose of warfarin for the subject is lower than a therapeutic dose of warfarin for a normal subject, comprising detecting in the subject the presence of a single nucleotide polymorphism in the VKOR gene, wherein the single nucleotide polymorphism is correlated with increased sensitivity to warfarin, thereby identifying the subject having increased sensitivity to warfarin.

2. (Currently amended) The method of claim 1, wherein the subject is Caucasian and the single nucleotide polymorphism in the VKOR gene is a G→C alteration at nucleotide 2581 of the nucleotide sequence of SEQ ID NO:11.

3. (Original) A method of identifying a human subject having increased sensitivity to warfarin, comprising:

- a) correlating the presence of a single nucleotide polymorphism in the VKOR gene with increased sensitivity to warfarin; and
- b) detecting the single nucleotide polymorphism of step (a) in the subject, thereby identifying a subject having increased sensitivity to warfarin.

4. (Currently amended) A method of identifying a single nucleotide polymorphism in the VKOR gene correlated with increased sensitivity to warfarin, comprising:

- a) identifying a human subject having increased sensitivity to warfarin;
- b) detecting in a population of the subjects of (a) above the presence of a single nucleotide polymorphism in the VKOR gene; and
- c) correlating the presence of the single nucleotide polymorphism of step (b) with the increased sensitivity to warfarin in the population of subjects, thereby identifying a single nucleotide polymorphism in the VKOR gene correlated with increased sensitivity to

warfarin.

5. (Currently amended) A method of correlating a single nucleotide polymorphism in the VKOR gene of a human subject with increased sensitivity to warfarin, comprising:

- a) identifying a subject having increased sensitivity to warfarin;
- b) determining the nucleotide sequence of the VKOR gene in a population of the subjects of (a);
- c) comparing the nucleotide sequence of step (b) with the wild type nucleotide sequence of the VKOR gene;
- d) detecting a single nucleotide polymorphism in the nucleotide sequence of (b); and
- e) correlating the single nucleotide polymorphism of (d) with increased sensitivity to warfarin in the subject of (a).

6-16. (Canceled).

17. (New) A method of screening for a single nucleotide polymorphism in the VKOR gene of a human subject that is associated with increased sensitivity to warfarin, comprising:

- a) detecting single nucleotide polymorphisms in the VKOR gene of a human subject;
- b) performing a population based study to detect the polymorphisms in a group of human subjects with increased sensitivity to warfarin and ethnically matched controls;
- c) identifying an allele of a single nucleotide polymorphism in the VKOR gene that is associated with increased sensitivity to warfarin.